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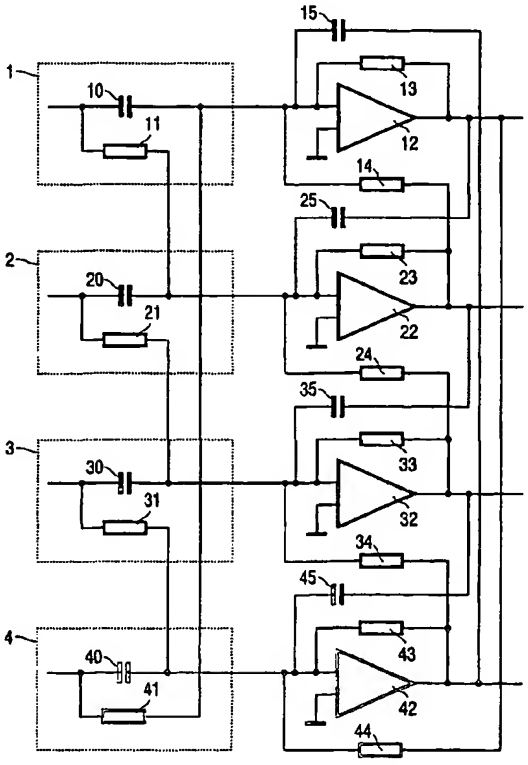
(54) Title: POLYPHASE FILTER WITH INTEGRATORS



(57) Abstract: Polyphase filters comprising filters each filter comprising passive elements. The filters are provided with integrators comprising amplifiers with admittance elements in feedback paths to create one or more other poles not situated on the negative imaginary axis in the plane pole-zero plot. A conductance element couples an output of an integrator to an input of a previous integrator for introducing a frequency shift for at least one pole in the plane pole-zero plot. A capacitor couples an output of an integrator to an input of a next integrator for improving the quality factor of the polyphase filter, which factor can then exceed . A signal inversion allows conductance elements to have negative values necessary for locating at least one pole at the most optimal location in the plane pole-zero plot.

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